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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/504,964	02/16/2000	Yasuhiko Shinjo	CU-2130-RJS	6722

26530 7590 06/02/2003

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CHICAGO, IL 60604

EXAMINER

CHEN, TIANJIE

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 06/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/504,964

Applicant(s)

SHINJO ET AL.

Examiner

Tianjie Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Non-Final Rejection (RCE)

Priority

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/08/2003 has been entered. Claims 1-3 are pending.

Double Patenting

2. Applicant is advised that should claim 1 be found allowable, claim 2 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzono et al (US 6,101,067) in view of Aboaf et al (US 6,038,106).

With regard to claim 1, Matsuzono et al shows a magnetic head device in Fig. 3A including: a base member 2 made of nonmagnetic material Al_2O_3 (Column 3, line 59); a thin-film magnetic head 5b+3+5a+6+9 (Column 6, line 32-49) which is in contact with the base member 2 and is accommodated in a single non-magnetic layer 7 (Fig. 3A), which thin-film magnetic head includes a lower yoke 6+5b (Column 6, lines 38-39), a magnetoresistive element 3 (Fig. 3B, Column 3, line 65), a upper yoke 5a+9 (Column 6, lines 46-47), inherent electrode terminals; and a slider surface 10 (Fig. 3A) on which magnetic tape slides in a first direction along which the base member 2, the non-magnetic layer are arranged.

Matsuzono et al does not show an auxiliary member made of non-magnetic material which sandwiches the non-magnetic layer between the auxiliary member and the base member.

Aboaf et al shows a magnetic head device, which is overcoated by non-magnetic material alumina (Column 8, lines 59-60).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to add the overcoat into Matsuzono et al's device. The rationale is as follows: Matsuzono et al shows a device, wherein the structure over pole 9 has been omitted. One of ordinary skill in the art would have been looking for the structure for this portion. Aboaf et al teaches to use non-magnetic material to overcoat the device. It is also a common practice to overcoat the magnetic head device with a non-magnetic material such as alumina. One of ordinary skill in the art would have been motivated by Aboaf et al's teaching to add the overcoat to Matsuzono et al's device. In thus constructed device, the overcoat constitutes an auxiliary member,

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which is made of non-magnetic material and sandwiches the non-magnetic layer between the auxiliary member and the base member.

With regard to claim 2, Matsuzono et al shows that thin-film magnetic head 3 is a magnetoresistive (MR) head (column 3, line 65).

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuzono et al in view of Aboaf et al as applied to claim 1, further in view of Isomura et al (US 5,227,940).

Matsuzono et al shows a magnetic head device as described above, but does not specify that in this device the non-magnetic layer on the slider surface has an area of 0.02 mm X 0.008 mm or less.

Isomura et al shows a magnetic head device, wherein the non-magnetic layer 2 (Fig. 1, column 14, line 32) has a thickness $b = 2 \times 10^{-6}$ mm (Column 16, line 8), and a length of the widthwise contour, which is less than $2d = 0.04$ mm (Column 16, line 4); the area of the non-magnetic layer on the slider surface is less than

0.000002 mm X 0.04 mm,

which is less than 0.02 mm X 0.08 mm. It would have been obvious at the time the invention was made to one of ordinary skill in the art to set the area of the non-magnetic layer on the slider surface in Matsuzono et al's device being 0.02 mm X 0.08 mm or less. The rationale is as follows: no unexpected effect resulted from the specific numbers of 0.02 mm X 0.08 mm was disclosed in this Application. One of ordinary skill in the art would have been searching for the size of the area through experimentation and optimization. Isomura et al discloses a similar magnetic head device, wherein the size of the area of the non-magnetic layer on the slider surface is

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less than 0.000002 mm X 0.04 mm, which is less than 0.02 mm X 0.08 mm. One of ordinary skill in the art would have been motivated to find a usable size of the area through experimentation and optimization, which would include the numbers disclosed by Isomura et al, which is less than 0.02 mm X 0.08 mm.

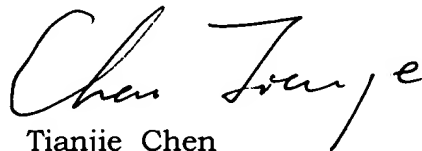
Response to Arguments

5. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-6037 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.



Tianjie Chen
Examiner
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May 29, 2003